INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We make Indiana a cleaner, healthier place to live.

Joseph E. Kernan
Governor

Lori F. Kaplan
Commissioner

100 North Senate Avenue
P. O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.IN.gov/idem

January 26, 2004

Mr. Scott Sanders
Howmet Corporation, LaPorte Casting
1110 E. Lincolnway
LaPorte, IN 46350

Re: 091-18287-00047
Fifth Minor Permit Revision to
MSOP 091-11567-00047

Dear Mr. Sanders:

Howmet Corporation, LaPorte Casting was issued a permit on July 20, 2000 for a stationary metal alloy casting plant. A letter notifying the Office of Air Quality of the addition of a barrel sander, a mold hot topping process and an acid etching operation was received on October 24, 2003. Pursuant to the provisions of 326 IAC 2-6.1-6(g)(4)F a minor permit revision to this permit is hereby approved as described in the attached Technical Support Document. All other conditions of the permit shall remain unchanged and in effect. For details please see the Technical Support Document.

The following construction conditions are applicable to the proposed project:

1. General Construction Conditions
The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Management (OAM).

2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

4. Pursuant to 326 IAC 2-1.1-9 (Revocation), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

Pursuant to 326 IAC 2-6.1-6, this permit shall be revised by incorporating the minor permit revision into the permit. All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this modification and the following revised permit pages to the front of the original permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Alic Bent, c/o OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027 and ask for extension (3-6878), or dial (973) 575-2555, extension 3206.

Sincerely,
Original signed by Paul Dubenetzky

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments
AB/EVP
cc: File - LaPorte County
U.S. EPA, Region V
LaPorte County Health Department
Air Compliance Section Inspector - Rick Massoels
Compliance Data Section - Karen Ampil
Administrative and Development
Technical Support and Modeling - Michelle Boner

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MINOR SOURCE OPERATING PERMIT
OFFICE OF AIR QUALITY

Howmet Corporation, LaPorte Casting
1110 E. Lincolnway
LaPorte, IN 46350

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this permit.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Operation Permit No.: MSOP091-11567-00047	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: July 20, 2000 Expiration Date: July 20, 2005

First Minor Permit Revision 091-13562, issued on March 23, 2001
Second Minor Permit Revision 091-14513, issued on October 12, 2001
Third Minor Permit Revision 091-14344, issued on January 10, 2002
Fourth Minor Permit Revision: 091-15209, issued on February 28, 2002
First Notice-only change: 091-15746-00047, issued on June 26, 2002
Second Notice-only change: 091-16283-00047, issued on August 20, 2002
Third Notice-only change: 091-16082-00047, issued on September 26, 2003
Fourth Notice-only change: 091-16448-00047, issued on November 27, 2002
Fifth Notice-only change: 091-17391-00047, issued on April 30, 2003
Sixth Notice-only change: 091-18007-00047, issued on October 17, 2003

Fifth Minor Permit Revision: 091-18287-00047	Pages Affected: 4, 5, 16 and 21
Issued by:Original signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date:January 26, 2004

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]

The Permittee owns and operates a stationary metal alloy casting plant.

Authorized Individual:	General Manager
Source Address:	1110 E. Lincolnway, LaPorte, IN 46350
Mailing Address:	1110 E. Lincolnway, LaPorte, IN 46350
Phone Number:	219-326-7400
SIC Code:	3324
County Location:	LaPorte
County Status:	Attainment for all criteria pollutants
	Attainment area for all other criteria pollutants
Source Status:	Minor Source Operating Permit
	Minor Source, under PSD Rules

A.2 Emissions units and Pollution Control Equipment Summary

This stationary source is approved to operate the following emissions units and pollution control devices:

(a) One (1) Ceramic Mold Operation, with a maximum capacity of 0.66 tons of metal and ceramic molds per hour and consisting of the following:

(1) One dewax furnace, with a maximum rated heat capacity of 5.75 mmBtu per hour, identified as DEWAX-BIG-BERTHA, utilizing two natural gas fired afterburners as control;

(2) Sanding towers, identified as STUCCO-TWR-7 thru STUCCO-TWR-22 & STUCCO-TWR-24 thru STUCCO-TWR-30, with a maximum capacity of 0.66 tons per hour of sand, utilizing a baghouse with High Efficiency Particulate Air (HEPA) filters as particulate control and discharging back into the Monoshell Department;

(3) One (1) fluidized bed (Fluidizer-03), located in the Monoshell Department, controlled by the 20,125 cfm baghouse with High Efficiency Particulate Air (HEPA) filters and discharging back into the Monoshell Department;

(4) Dip Manufacturing operation, using a maximum of 30 bags of Zircon flour per hour, to be controlled by the 1,500 cfm baghouse;

(5) One (1) barrel sander, with a maximum capacity of 0.6 tons per year of sand, connected to High Efficiency Particulate Air (HEPA) filters and discharging back into the Monoshell Department.

(b) Finished casting line, with a maximum capacity of 3.0 tons per hour of unfinished castings and ceramic shells and consisting of:

(1) Arc welding gate removal, identified as PLASMA-CUTTER and aluminum oxide blasting, each using a Carter Day baghouse as control and exhausting to stacks

ZK1, ZK2 and ZK3;

(2) Fifty-five (55) grinding booths, identified as DUST-COLL-FARR-PORTABLE-001, DUST-COLL-MONO-FARR, DUST-COLL-FARR-001 thru DUST-COLL-FARR-002 & DUST-COLL-FARR-004 thru DUST-COLL-FARR-054, with a maximum capacity of 3.0 tons per hour of metal, each using a single cartridge-filter system as control, and exhausting to the interior of the building;

(3) One (1) Shotblast cabinet, identified as BLAST-05, with a maximum capacity of 3.0 tons per hour of metal, controlled by a 6000 cfm baghouse;

(4) One (1) Chemical Shell removal operation, with a heater, identified as LOW-TEMP, with a maximum capacity of 2.70 mmBtu per hour, using:
(A) Heated caustic solutions,
(B) A power wash, and
(C) An acid etching process, equipped with a scrubber;

(5) Pneumatic Shell Removal, identified as KNOCKOUT-01 and KNOCKOUT-02 , each with a maximum capacity of 0.33 tons per hour of casting shells, controlled by a 6000 cfm baghouse.

(c) One Metal Melting and Auxiliary Operations, with a maximum capacity of 3.0 tons per hour of metal and consisting of:

(1) Nine (9) Shell Preheater Ovens, identified as VACUUM-CAST-02, ROLLOVER-CAST-05, VACUUM-CAST-06, VACUUM-CAST-08, VACUUM-CAST-09, & VACUUM-CAST-10, with a maximum rated heat input of 6.8, 0.75, 6.8, 6.8, 6.8, 0.75, 6.8, 6.8 and 0.75 million British Thermal Units (mmBtu) per hour, respectively, and exhausting to stacks 2P, 2P1, 4P, 5P, 6P, 6P1, 9P, 10P, 10P1, respectively;

(2) Six (6) Electric Induction Ovens, identified as VACUUM-CAST-02, ROLLOVER-CAST-05, VACUUM-CAST-06, VACUUM-CAST-08, VACUUM-CAST-09, & VACUUM-CAST -10; and

(3) One (1) mold hot topping process.

(d) Three (3) natural gas Boilers, identified as BOILER-HUMIDITY, BOILER-EAST, & BOILER-DEGREASE, constructed in 1991, 1991and 1994, respectively, with a maximum rated heat input of 2, 4.2 and 1.4 million British Thermal Units (mmBtu) per hour, respectively, and exhausting to stacks B1, B3 and O4H, respectively;

(e) One (1) hot water heater, with a maximum rated heat input of 0.65 mmBtu per hour, respectively, and exhausting to stack HW01;

(f) Two (2) standby diesel generators identified as GEN-AUXPWR-01 & GEN-AUXPWR-02 with a maximum capacity of 315 horsepower and 375 horsepower, respectively;

(g) One (1) monoshell latex surface coating booth, identified as monoshell, with a maximum capacity of 15 wax forms per hour, using dry filters as particulate control and exhausting at one (1) stack, identified as MS1; and

(h) One (1) natural gas fired Boiler, identified as Superior Boiler #3, constructed in 1957, with a

maximum rated heat input of 13.4 million British Thermal Units (mmBtu) per hour, exhausting to stack B2.

SECTION B GENERAL CONSTRUCTION CONDITIONS

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1.1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

B.1 Permit No Defense [IC 13]

This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

B.2 Definitions

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2, and 326 IAC 2-1.1-1 shall prevail.

B.3 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.

B.4 Revocation of Permits [326 IAC 2-1.1-9(5)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

C.1 Particulate Matter Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) pounds per hour [326 IAC 6-3-2(c)]

Pursuant to 326 IAC 6-3-2(c), the allowable particulate matter emissions rate from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.

C.2 PSD Minor Source Status [326 IAC 2-2] [40 CFR 52.21]

(a) The total source potential to emit of all criteria pollutants is less than 250 tons per year. Therefore the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 will not apply.

(b) Any change or modification which may increase potential to emit to 250 tons per year from this source, shall cause this source to be considered a major source under PSD, 326 IAC 2-2 and 40 CFR 52.21, and shall require approval from IDEM, OAQ prior to making the change.

(c) Any change or modification which may increase potential to emit to 10 tons per year of any single hazardous air pollutant, twenty-five tons per year of any combination of hazardous air pollutants, or 100 tons per year of any other regulated pollutant from this source, shall cause this source to be considered a major source under Part 70 Permit Program, 326 IAC 2-7, and shall require approval from IDEM, OAQ prior to making the change.

C.3 Preventive Maintenance Plan [326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) after issuance of this permit, including the following information on each emissions unit:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

(b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that failure to implement the Preventive Maintenance Plan does not cause or contribute to a violation of any limitation on emissions or potential to emit.

(c) PMP's shall be submitted to IDEM, OAQ, upon request and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.

C.4 Permit Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]

(a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1.

(c) The Permittee shall notify the OAQ within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

C.5 Inspection and Entry [326 IAC 2-7-6(2)]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) Have access to and copy, at reasonable times, any records that must be kept under this title or the conditions of this permit or any operating permit revisions;

(c) Inspect, at reasonable times, any processes, emissions units (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit or any operating permit revisions;

(d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

C.6 Transfer of Ownership or Operation [326 IAC 2-6.1-6(d)(3)]

Pursuant to [326 IAC 2-6.1-6(d)(3)] :

(a) In the event that ownership of this source is changed, the Permittee shall notify IDEM, OAQ, Permits Branch within thirty (30) days of the change.

(b) The written notification shall be sufficient to transfer the permit to the new owner by an notice-only change pursuant to 326 IAC 2-6.1-6(d)(3).

(c) IDEM, OAQ, shall issue a revised permit.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

C.7 Permit Revocation [326 IAC 2-1-9]

Pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit to operate may be revoked for any of the following causes:

(a) Violation of any conditions of this permit.

(b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.

(c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.

(d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.

(e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of this article.

C.8 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

C.9 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

Testing Requirements

C.10 Performance Testing [326 IAC 3-6][326 IAC 2-1.1-11]

(a) Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

(b) All test reports must be received by IDEM, OAQ within forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAQ, if the source submits to IDEM, OAQ, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

Compliance Monitoring Requirements

C.11 Compliance Monitoring [326 IAC 2-1.1-11]

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

C.12 Monitoring Methods [326 IAC 3]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, or other approved methods as specified in this permit.

C.13 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 1-6]

(a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. This compliance monitoring plan is comprised of:

(1) This condition;

(2) The Compliance Determination Requirements in Section D of this permit;

(3) The Compliance Monitoring Requirements in Section D of this permit;

(4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this permit; and

(5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. CRP's shall be submitted to IDEM, OAQ upon request and shall be subject to review and approval by IDEM, OAQ. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee and maintained on site, and is comprised of :

(A) Response steps that will be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and

(B) A time schedule for taking such response steps including a schedule for devising additional response steps for situations that may not have been predicted.

(b) For each compliance monitoring condition of this permit, appropriate response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to perform the actions detailed in the compliance monitoring conditions or failure to take the response steps within the time prescribed in the Compliance Response Plan, shall constitute a violation of the permit unless taking the response steps set forth in the Compliance Response Plan would be unreasonable.

(c) After investigating the reason for the excursion, the Permittee is excused from taking further response steps for any of the following reasons:

(1) The monitoring equipment malfunctioned, giving a false reading. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.

(2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied or;

(3) An automatic measurement was taken when the process was not operating; or

(4) The process has already returned to operating within "normal" parameters and no response steps are required.

(d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken.

C.14 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11]

(a) Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (±2%) of full scale reading.

(b) Whenever a condition in this permit requires the measurement of a flow rate the instrument employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (±2%) of full scale reading.

(c) The Permittee may request the IDEM, OAQ approve the use of a pressure gauge or other instrument that does not meet the above specifications provided the Permittee can demonstrate an alternative pressure gauge or other instrument specification will adequately ensure compliance with permit conditions requiring the measurement of pressure drop or other parameters.

Record Keeping and Reporting Requirements

C.15 Malfunctions Report [326 IAC 1-6-2]

Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

(a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) or appointed representative upon request.

(b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.

(c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).

(d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control

equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.16 Monitoring Data Availability [326 IAC 2-6.1-2] [IC 13-14-1-13]

(a) With the exception of performance tests conducted in accordance with Section C-Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the equipment is operating at normal representative conditions.

(b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this permit is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this permit.

(c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.

(d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.

(e) At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.

(f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.17 General Record Keeping Requirements [326 IAC 2-6.1-2]

(a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAQ, representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Records of required monitoring information shall include, where applicable:

(1) The date, place, and time of sampling or measurements;

(2) The dates analyses were performed;

(3) The company or entity performing the analyses;

(4) The analytic techniques or methods used;

(5) The results of such analyses; and

(6) The operating conditions existing at the time of sampling or measurement.

(c) Support information shall include, where applicable:

(1) Copies of all reports required by this permit;

(2) All original strip chart recordings for continuous monitoring instrumentation;
(3) All calibration and maintenance records;

(4) Records of preventive maintenance shall be sufficient to demonstrate that failure to implement the Preventive Maintenance Plan did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this permit, and whether a deviation from a permit condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.

(d) All record keeping requirements not already legally required shall be implemented when operation begins.

C.18 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

(a) Reports required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(b) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(c) Unless otherwise specified in this permit, any report required in Section D shall be submitted within thirty (30) days of the end of the reporting period. The report does not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(d) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calender years.

C.19 Annual Notification [326 IAC 2-6.1-5(a)(5)]

(a) Annual notification shall be submitted to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.

(b) Noncompliance with any condition must be specifically identified. If there are any permit conditions or requirements for which the source is not in compliance at any time during the year, the Permittee must provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be, achieved. The notification must be signed by an authorized individual.

(c) The annual notice shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in the format attached no later than March 1 of each year to:

Compliance Data Section, Office of Air Quality
Indiana Department of Environmental Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, IN 46206-6015

(d) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

(a) One (1) Ceramic Mold Operation, with a maximum capacity of 0.66 tons of metal and ceramic molds per hour and consisting of the following:

(1) One dewax furnace, with a maximum rated heat capacity of 5.75 mmBtu per hour, identified as DEWAX-BIG-BERTHA, utilizing two natural gas fired afterburners as control;

(2) Sanding towers, identified as STUCCO-TWR-7 thru STUCCO-TWR-22 & STUCCO-TWR-24 thru STUCCO-TWR-30, with a maximum capacity of 0.66 tons per hour of sand, utilizing a baghouse with High Efficiency Particulate Air (HEPA) filters as particulate control and discharging back into the Monoshell Department;

(3) One (1) fluidized bed (Fluidizer-03), located in the Monoshell Department, controlled by the 20,125 cfm baghouse with High Efficiency Particulate Air (HEPA) filters and discharging back into the Monoshell Department;

(4) Dip Manufacturing operation, using a maximum of 30 bags of Zircon flour per hour, to be controlled by the 1,500 cfm baghouse;

(5) One (1) barrel sander, with a maximum capacity of 0.6 tons per year of sand, connected to High Efficiency Particulate Air (HEPA) filters and discharging back into the Monoshell Department.

(b) Finished casting line, with a maximum capacity of 3.0 tons per hour of unfinished castings and ceramic shells and consisting of:

(1) Arc welding gate removal, identified as PLASMA-CUTTER and aluminum oxide blasting, each using a Carter Day baghouse as control and exhausting to stacks ZK1, ZK2 and ZK3;

(2) Fifty-five (55) grinding booths, identified as DUST-COLL-FARR-PORTABLE-001, DUST-COLL-MONO-FARR, DUST-COLL-FARR-001 thru DUST-COLL-FARR-002 & DUST-COLL-FARR-004 thru DUST-COLL-FARR-054, with a maximum capacity of 3.0 tons per hour of metal, each using a single cartridge-filter system as control, and exhausting to the interior of the building;

(3) One (1) Shotblast cabinet, identified as BLAST-05, with a maximum capacity of 3.0 tons per hour of metal, controlled by a 6000 cfm baghouse;

(4) One (1) Chemical Shell removal operation, with a heater, identified as LOW-TEMP, with a maximum capacity of 2.70 mmBtu per hour, using:

(A) Heated caustic solutions,

(B) A power wash, and

(C) An acid etching process, equipped with a scrubber;

(5) Pneumatic Shell Removal, identified as KNOCKOUT-01 and KNOCKOUT-02 , each with a maximum capacity of 0.33 tons per hour of casting shells, controlled by a 6000 cfm baghouse.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards

D.1.1 Particulate Matter (PM) [326 IAC 6-3-2(c)]

Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the:

(a) one (1) Shotblast cabinet, (ID BLAST-05) shall not exceed 8.56 pounds per hour when operating at a process weight rate of 6000 pounds per hour.

(b) fifty-five (55) grinding booths, (ID DUST-COLL-FARR-PORTABLE-001, DUST-COLL-MONO-FARR, DUST-COLL-FARR-001 thru DUST-COLL-FARR-002 & DUST-COLL-FARR-004 thru DUST-COLL-FARR-054) shall not exceed 8.56 pounds per hour when operating at a process weight rate of 6000 pounds per hour.

(c) pneumatic Shell Removal, (ID KNOCKOUT-01 and KNOCKOUT-02) shall not exceed 1.95 pounds per hour when operating at a process weight rate of 660 pounds per hour.

(c) Dip Manufacturing Process shall not exceed 3.38 pounds per hour when operating at a process weight rate of 1500 pounds per hour.

(d) Sanding Towers, (STUCCO-TWR-7 thru STUCCO-TWR-22 & STUCCO-TWR-24 thru STUCCO-TWR-30) and Fluidized Bed (Fluidizer-03) shall not exceed 1.26 pounds per hour when operating at a process weight rate of 344 pounds per hour.

The pounds per hour limitations were calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

Compliance Determination Requirements

D.1.2 Testing Requirements [326 IAC 3-6] [326 IAC 2-1.1-11]

During the period between 30 and 36 months after issuance of MSOP091-11567-00047, the Permittee shall perform PM and PM-10 testing on one of the Pneumatic Shell Removal units, identified as KNOCKOUT-01 or KNOCKOUT-02, utilizing Methods 5 or 17 (40 CFR 60, Appendix A) to verify emission factors for PM and Methods 201 or 201A and 202 (40 CFR 51, Appendix M) for PM-10, or other methods as approved by the Commissioner. PM-10 includes filterable and condensible PM-10. If this test shows compliance with the emission factors and verifies that the source is a minor source, no repeat testing for these specific units shall be required. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the emissions unit is in compliance.

D.1.3 Particulate Matter (PM)

The baghouses for PM control shall be in operation at all times when the one (1) Shotblast cabinet, (ID BLAST-05), pneumatic Shell Removal, (ID KNOCKOUT-01 and KNOCKOUT-02), twenty three (23) Sanding Towers, (STUCCO-TWR-7 thru STUCCO-TWR-22 & STUCCO-TWR-24 thru STUCCO-

TWR-30) and one (1) fluidized bed (Fluidizer-03) units are in operation.

Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.1.4 Visible Emissions Notations

(a) Weekly visible emission notations of the one (1) Shotblast cabinet, (ID BLAST-05 and pneumatic Shell Removal, (ID KNOCKOUT-01 and KNOCKOUT-02) units stack exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.1.5 Parametric Monitoring

(a) The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the one (1) Shotblast cabinet, (ID BLAST-05) and pneumatic Shell Removal, (ID KNOCKOUT-01 and KNOCKOUT-02) units, at least once weekly when the one (1) Shotblast cabinet, (ID BLAST-05) and pneumatic Shell Removal, (ID KNOCKOUT-01 and KNOCKOUT-02) units is in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 1.0 and 7.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

(b) The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the twenty three (23) Sanding Towers, (STUCCO-TWR-7 thru STUCCO-TWR-22 & STUCCO-TWR-24 thru STUCCO-TWR-30) and one (1) fluidized bed (Fluidizer-03), at least once per shift when the units are in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 1.0 and 7.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for

any one reading. The recording of static pressure drop is optional when venting indoors.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.1.6 Baghouse Inspections

(a) An inspection shall be performed semi-annually of all bags used in conjunction with the one (1) Shotblast cabinet, (ID BLAST-05) and pneumatic Shell Removal, (ID KNOCKOUT-01 and KNOCKOUT-02) units when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and semi-annually thereafter. All defective bags shall be replaced.

(b) An inspection shall be performed each calender quarter of all bags controlling the twenty three (23) Sanding Towers, (STUCCO-TWR-7 thru STUCCO-TWR-22 & STUCCO-TWR-24 thru STUCCO-TWR-30) and one (1) fluidized bed (Fluidizer-03) operations when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

D.1.7 Broken or Failed Bag Detection

In the event that bag failure has been observed:

(a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.1.8 Record Keeping Requirements

(a) To document compliance with Condition D.1.4, the Permittee shall maintain the following:

(1) weekly visible emission notations of the one (1) Shotblast cabinet, (ID BLAST-05) and pneumatic Shell Removal, (ID KNOCKOUT-01 and KNOCKOUT-02) units stack exhaust.

(b) To document compliance with Condition D.1.5, the Permittee shall maintain the following:

(1) Weekly records of the following operational parameters during normal operation when venting to the atmosphere:

(A) Inlet and outlet differential static pressure; and

(B) Cleaning cycle: frequency and differential pressure.

(2) Documentation of all response steps implemented, per event .

(3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.

(4) Quality Assurance/Quality Control (QA/QC) procedures.

(5) Operator standard operating procedures (SOP).

(6) Manufacturer's specifications or its equivalent.

(7) Equipment "troubleshooting" contingency plan.

(8) Documentation of the dates vents are redirected.

(c) To document compliance with Condition D.1.6, the Permittee shall maintain records of the results of the inspections required under Condition D.1.6 and the dates the vents are redirected.

(d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

(c) One Metal Melting and Auxiliary Operations, with a maximum capacity of 3.0 tons per hour of metal and consisting of:

(1) Nine (9) Shell Preheater Ovens, identified as VACUUM-CAST-02, ROLLOVER-CAST-05, VACUUM-CAST-06, VACUUM-CAST-08, VACUUM-CAST-09, & VACUUM-CAST-10, with a maximum rated heat input of 6.8, 0.75, 6.8, 6.8, 6.8, 0.75, 6.8, 6.8 and 0.75 million British Thermal Units (mmBtu) per hour, respectively, and exhausting to stacks 2P, 2P1, 4P, 5P, 6P, 6P1, 9P, 10P, 10P1, respectively;

(2) Six (6) Electric Induction Ovens, identified as VACUUM-CAST-02, ROLLOVER-CAST-05, VACUUM-CAST-06, VACUUM-CAST-08, VACUUM-CAST-09, & VACUUM-CAST - 10; and

(3) One (1) mold hot topping process.

(d) Three (3) natural gas Boilers, identified as BOILER-HUMIDITY, BOILER-EAST, & BOILER-DEGREASE, constructed in 1991, 1991and 1994, respectively, with a maximum rated heat input of 2, 4.2 and 1.4 million British Thermal Units (mmBtu) per hour, respectively, and exhausting to stacks B1, B3 and O4H, respectively;

(e) One (1) hot water heater, with a maximum rated heat input of 0.65 mmBtu per hour, respectively, and exhausting to stack HW01;

(f) Two (2) standby diesel generators identified as GEN-AUXPWR-01 & GEN-AUXPWR-02 with a maximum capacity of 315 horsepower and 375 horsepower, respectively;

(g) One (1) monoshell latex surface coating booth, identified as monoshell, with a maximum capacity of 15 wax forms per hour, using dry filters as particulate control and exhausting at one (1) stack, identified as MS1;

(h) One (1) natural gas fired Boiler, identified as Superior Boiler #3, constructed in 1957, with a maximum rated heat input of 13.4 million British Thermal Units (mmBtu) per hour, exhausting to stack B2.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards

D.2.1 Particulate Matter Limitation (PM) [326 IAC 6-2-4]

(a) Pursuant to 326 IAC 6-2-3 (d) (Particulate emission limitations for sources of indirect heating) particulate emissions from Superior Boiler #3, with rated capacity of 13.4 mmBtu/hr shall be limited to 0.8 lb/mmBtu.

(b) Pursuant to 326 IAC 6-2-4 (a) (Particulate emission limitations for sources of indirect heating) particulate emissions from two (2) boilers, identified as BOILER-HUMIDITY and BOILER-EAST shall be limited to 0.50 lb/mmBtu, based on a total rate capacity of 19.6 mmBtu/hr.

(c) Pursuant to 326 IAC 6-2-4 (a) (Particulate emission limitations for sources of indirect heating) particulate emissions from one (1) boiler, identified as BOILER-DEGREASE shall be limited to 0.49 lb/mmBtu, based on a total rate capacity of 21.0 mmBtu/hr.

Above emission rates were based on the calculations using the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

where: Q = total source rated capacity in mmBtu/hr

D.2.2 Particulate Matter (PM) [326 IAC 6-3-2(c)]

Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the one Melted Metal Operation, shall not exceed 8.56 pounds per hour when operating at a process weight rate of 6000 pounds per hour.

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and P = process weight rate in tons per hour

D.2.3 Natural Gas Fuel

The three (3) natural gas Boilers, identified as BOILER-HUMIDITY, BOILER-EAST, & BOILER-DEGREASE, shall use only natural gas fuel.

Compliance Determination Requirements

D.2.4 Testing Requirements [326 IAC 2-1.1-11]

The Permittee is not required to test this emissions unit by this permit. However, IDEM may require compliance testing when necessary to determine if the emissions unit is in compliance. If testing is required by IDEM, compliance with the PM limit specified in Condition D.2.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

There are no Compliance Monitoring Requirements applicable to these emission units.

Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

There are no Record Keeping and Reporting Requirements applicable to these emission units.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION

MINOR SOURCE OPERATING PERMIT
ANNUAL NOTIFICATION

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

Company Name:	**Howmet Corporation, LaPorte Casting**
Address:	**1110 E. Lincolnway, LaPorte, IN 46350**
City:	**LaPorte**
Phone #:	**219-326-7400**
MSOP #:	**091-11567-00047**

I hereby certify that **Howmet Corporation, LaPorte Casting** is **?** still in operation.
? no longer in operation.

I hereby certify that **Howmet Corporation, LaPorte Casting** is
? in compliance with the requirements of MSOP **091-11567-00047**.
? not in compliance with the requirements of MSOP **091-11567-00047**.

Authorized Individual (typed):
Title:
Signature:
Date:

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

Noncompliance:

MALFUNCTION REPORT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
FAX NUMBER - 317 233-5967

This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE IT HAS POTENTIAL TO EMIT 25 TONS/YEAR PARTICULATE MATTER ?_____, 25 TONS/YEAR SULFUR DIOXIDE ?_____, 25 TONS/YEAR NITROGEN OXIDES?_____, 25 TONS/YEAR VOC ?_____, 25 TONS/YEAR HYDROGEN SULFIDE ?_____, 25 TONS/YEAR TOTAL REDUCED SULFUR ?_____, 25 TONS/YEAR REDUCED SULFUR COMPOUNDS ?_____, 25 TONS/YEAR FLUORIDES ?_____, 100TONS/YEAR CARBON MONOXIDE ?_____, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ?_____, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ?_____, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ?_____, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ?_____. EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC _____ OR, PERMIT CONDITION # _____ AND/OR PERMIT LIMIT OF _____

THIS INCIDENT MEETS THE DEFINITION OF 'MALFUNCTION' AS LISTED ON REVERSE SIDE ? Y N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ? Y N

COMPANY:__Howmet Corporation, LaPorte Casting__PHONE NO. (219) 326-7400_____
LOCATION: (CITY AND COUNTY)__LaPorte, LaPorte County_____
PERMIT NO. 091-11567-00047_ AFS PLANT ID: __091-00047_____ AFS POINT ID: _____ INSP:_Rick Massoels_____
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON:_____
_____
__
DATE/TIME MALFUNCTION STARTED: _____/_____/ 20____ _____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____ ___

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE_____/_____/ ____20 _____ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO2, VOC, OTHER:_____

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

_____

MEASURES TAKEN TO MINIMIZE EMISSIONS:_____

_____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES:_____
CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS:_____
CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT:_____
INTERIM CONTROL MEASURES: (IF APPLICABLE)_____
_____
_____

MALFUNCTION REPORTED BY:_____TITLE:_____
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY:_____DATE:_____TIME:_____

*SEE PAGE 2

Please note - This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

326 IAC 1-6-1 Applicability of rule

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

326 IAC 1-2-39 "Malfunction" definition

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

***Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

_____

_____

PAGE 2 OF 2

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Minor Permit Revision to a Minor Source Operating Permit

Source Background and Description

Source Name:	Howmet Corporation, LaPorte Casting
Source Location:	1110 E. Lincolnway, LaPorte, IN 46350
County:	LaPorte
SIC Code:	3324
Operation Permit No.:	MSOP 091-11567-00047
Operation Permit Issuance Date:	July 20, 2000
Permit Revision No.:	091-18287-00047
Permit Reviewer:	Alic Bent/EVP

The Office of Air Quality (OAQ) has reviewed a revision application from Howmet Corporation, LaPorte Casting relating to the addition of three (3) units to the MSOP.

History

On October 24, 2003, Howmet Corporation, LaPorte Casting submitted an application to the OAQ requesting the addition of three (3) units to their existing permit. Howmet Corporation, LaPorte Casting was issued a MSOP on July 20, 2000.

The requests made by Howmet Corporation are as follows:

(a) Installation of a barrel sander, with a maximum capacity of 0.6 tons per year of sand, connected to High Efficiency Particulate Air (HEPA) filters and discharging back into the Monoshell Department;

(b) Addition of the mold hot topping process, that was inadvertently not considered to be a source of emissions in the original permit 091-11567-00047; and

(c) Addition of the acid etching operation, equipped with a scrubber, that was inadvertently not included in the original permit 091-11567-00047.

Existing Approvals

The source was issued a MSOP on July 20, 2000. The source has since received the following:

(a) First Minor Permit Revision: 091-13562-00047, issued on March 23, 2001;

(b) Second Minor Permit Revision: 091-14513-00047, issued on October 12, 2001; and

(c) Third Minor Permit Revision: 091-14344-00047, issued on January 10, 2002.

(d) Fourth Minor Permit Revision: 091-15209-00047, issued on February 28, 2002

(e) First Notice-only change: 091-15746-00047, issued on June 26, 2002;

(f) Second Notice-only change: 091-16283-00047, issued on August 20, 2002;

(g) Third Notice-only change: 091-16082-00047, issued on September 26, 2003;

(h) Fourth Notice-only change: 091-16448-00047, issued on November 27, 2002;

(i) Fifth Notice-only change: 091-17391-00047, issued on April 30, 2003; and

(j) Sixth Notice-only change: 091-18007-00047, issued on October 17, 2003.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the Minor Permit Revision be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on October 24, 2003.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (Appendix A, 2 pages).

Unrestricted Potential Emissions of Modification

The PTE of the modification is based on the barrel sander, mold hot topping and acid etching processes.

Pollutant	Unrestricted Potential Emissions (tons/year)
PM	0.01
PM-10	0.01
SO_2	0.00
VOC	0.01
CO	0.00
NO_x	0.00

HAP's	Unrestricted Potential Emissions (tons/yr)
HF	7.98
HCl	1.40

TOTAL	9.38

Unrestricted Potential Emissions for the Entire Source

This table reflects the unrestricted potential emissions for the entire source.

Pollutant	Potential To Emit (tons/year)
PM	3,641.98
PM-10	75.74
SO_2	0.55
VOC	2.26
CO	29.11
NO_x	38.63

HAPs	Potential To Emit (tons/year)
Lead	1.31
Hexane	0.45
HF	7.98
HCl	1.40
Total	11.14

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination HAPs is less than twenty-five (25) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

(b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM, PM10, CO and NOx are equal to or greater than 25 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-6.1-3(b).

Justification for Modification

The MSOP is being modified through a Minor Permit Revision. This modification is being performed pursuant to 326 IAC 2-6.1-6(g)(4)F, as it is a modification for which the potential to emit of HCl and HF are each equal to or greater than 1 ton per year and less than 10 tons per year, and less than 25 tons per year for any combination of HAPs.

County Attainment Status

The source is located in LaPorte County.

Pollutant	Status
PM-10	attainment
SO_2	attainment
NO_2	attainment
Ozone	attainment

CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. LaPorte County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) LaPorte County has been classified as attainment or unclassifiable for all pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Potential to Emit After Controls for the Modification

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units for the modification.

	Potential to Emit (tons/year)							
Process/facility	PM	PM-10	SO_2	VOC	CO	NO_X	Single HAP	Total HAPs
Barrel Sander	0.01	0.01	0.00	0.01	0.00	0.00	0.00	0.00
Hot Topping	0.00	0.00	0.00	0.00	0.00	0.00	7.98	7.98
Acid Etching	0.00	0.00	0.00	0.00	0.00	0.00	1.40	1.40
Total Emissions	0.01	0.01	0.00	0.01	0.00	0.00	7.98	9.38

The source MSOP status does not change as a result of these additions.

Federal Rule Applicability

There are no new federal rules applicable to this source during this Minor Permit Revision. The applicability determination that follows is based on that conducted for the original Minor Source Operating Permit MSOP091-11567-00047, issued on July 20, 2000.

State Rule Applicability - Entire Source

There are no new state rules applicable to this source during this Minor Permit Revision. The applicability determination that follows is based on that conducted for the original Minor Source Operating Permit MSOP091-11567-00047, issued on July 20, 2000.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

The hot topping process and the acid etching process each has potential to emit single HAP and a combination of HAPs of less than 10 and 25 tons per year, respectively. Therefore, 326 IAC 2-4.1 does not apply.

State Rule Applicability - Individual Facilities

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

Pursuant to 326 IAC 6-3-1(b)(14), the barrel sander is exempt from 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because the potential emissions from this unit are less than 0.551 pounds per hour.

Compliance Requirements

Permits issued under 326 IAC 2-6 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-6.1-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

There are no Compliance Monitoring Requirements applicable to the revision to this permit.

Changes Proposed

The following changes have been made to the Minor Source Operating Permit (091-11567-00047) issued on July 20, 2000.

(1) The emission units and pollution control equipment summary list in Section A.2, Items (a) through (c), on Pages 4 and 5 of the permit shall be revised as follows:

A.2 Emissions units and Pollution Control Equipment Summary

This stationary source is approved to operate the following emissions units and pollution control devices:

(a) One (1) Ceramic Mold Operation, with a maximum capacity of 0.66 tons of metal and ceramic molds per hour and consisting of the following:

(4) Dip Manufacturing operation, using a maximum of 30 bags of Zircon flour per hour, to be controlled by the 1,500 cfm baghouse~~.~~**;**

(5) One (1) barrel sander, with a maximum capacity of 0.6 tons per year of sand, connected to High Efficiency Particulate Air (HEPA) filters and discharging back into the Monoshell Department.

(b) Finished casting line, with a maximum capacity of 3.0 tons per hour of unfinished castings and ceramic shells and consisting of:

(4) One (1) Chemical Shell removal **operation, with a** heater, identified as LOW-TEMP, with a maximum capacity of 2.70 mmBtu per hour**, using:**~~:~~;
(A) Heated caustic solutions,
(B) A power wash, and
(C) An acid etching process, equipped with a scrubber;

(5) Pneumatic Shell Removal, identified as KNOCKOUT-01 and KNOCKOUT-02 , each with a maximum capacity of 0.33 tons per hour of casting shells, controlled by a 6000 cfm baghouse.

(c) One Metal Melting and Auxiliary Operations, with a maximum capacity of 3.0 tons per hour of metal and consisting of:

(1) Nine (9) Shell Preheater Ovens, identified as VACUUM-CAST-02, ROLLOVER-CAST-05, VACUUM-CAST-06, VACUUM-CAST-08, VACUUM-CAST-09, & VACUUM-CAST-10, with a maximum rated heat input of 6.8, 0.75, 6.8, 6.8, 6.8, 0.75, 6.8, 6.8 and 0.75 million British Thermal Units (mmBtu) per hour, respectively, and exhausting to stacks 2P, 2P1, 4P, 5P, 6P, 6P1, 9P, 10P, 10P1, respectively; ~~and~~

(2) Six (6) Electric Induction Ovens, identified as VACUUM-CAST-02, ROLLOVER-CAST-05, VACUUM-CAST-06, VACUUM-CAST-08, VACUUM-CAST-09, & VACUUM-CAST -10~~-~~**; and**

(3) One (1) mold hot topping process.

(2) The following changes will be incorporated into the facility description in Section D.1, on pages 17 and 22 of Minor Source Operation Permit (MSOP 091-11567-00047) issued on July 20, 2000:

SECTION D.1 FACILITY OPERATION CONDITIONS

Emission Unit Description

(a) One (1) Ceramic Mold Operation, with a maximum capacity of 0.66 tons of metal and ceramic molds per hour and consisting of the following:

(4) Dip Manufacturing operation, using a maximum of 30 bags of Zircon flour per hour, to be controlled by the 1,500 cfm baghouse~~.~~**;**

(5) One (1) barrel sander, with a maximum capacity of 0.6 tons per year of sand, connected to High Efficiency Particulate Air (HEPA) filters and discharging back into the Monoshell Department.

(b) Finished casting line, with a maximum capacity of 3.0 tons per hour of unfinished castings and ceramic shells and consisting of:

(4) One (1) Chemical Shell removal **operation, with a** heater, identified as LOW-TEMP, with a maximum capacity of 2.70 mmBtu per hour**, using:**~~;~~

(A) Heated caustic solutions,

(B) A power wash, and

(C) An acid etching process, equipped with a scrubber;

(c) One Metal Melting and Auxiliary Operations, with a maximum capacity of 3.0 tons per hour of metal and consisting of:

(1) Nine (9) Shell Preheater Ovens, identified as VACUUM-CAST-02, ROLLOVER-CAST-05, VACUUM-CAST-06, VACUUM-CAST-08, VACUUM-CAST-09, & VACUUM-CAST-10, with a maximum rated heat input of 6.8, 0.75, 6.8, 6.8, 6.8, 0.75, 6.8, 6.8 and 0.75 million British Thermal Units (mmBtu) per hour, respectively, and exhausting to stacks 2P, 2P1, 4P, 5P, 6P, 6P1, 9P, 10P, 10P1, respectively; ~~and~~

(2) Six (6) Electric Induction Ovens, identified as VACUUM-CAST-02, ROLLOVER-CAST-05, VACUUM-CAST-06, VACUUM-CAST-08, VACUUM-CAST-09, & VACUUM-CAST -10~~.~~**; and**

(3) One (1) mold hot topping process.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Conclusion

The operation of this stationary metal alloy casting plant shall be subject to the conditions of the attached proposed Minor Permit Revision No. 091-18287-00047.

Appendix A: Emission Calculations
HAP Calculations

Company Name: **Howmet Corporation - LaPorte Casting Division**
Address City IN Zip: **1110 East Lincoln Way, LaPorte, IN 46350**
MPR#: **091-18287-00047**
Permit Reviewer: **Alic Bent/EVP**
Date: **24-Nov-03**

Hydrogen Fluoride Emissions

Hot Topping	Ferrux Usage (lbs/yr)	Conc. of F_6Na_2Si in Ferrux (%)	Hydrogen Fluoride EF (lbs HF/lb F_6Na_2Si)	HF Emissions (tons/yr)
	250,000.00	10%	0.63830	7.98

Note:

Ferrux hot top material contains 10% sodium fluorosilicate (F_6Na_2Si).
Emissions factor for HF generated from F_6Na_2Si based on material balance and assumes 100% conversion.
$F_6Na_2Si + H_2O = 6HF$ + other non HAP products
$6HF / F_6Na_2Si = 6(20.0063)/(188.05594) = 0.6383$

HCl Emissions from an HCl Acid Tank

Acid Etch	Vapor Pressure (psia)	Area of Tank (ft^2)	Gas-Mass Transfer Coefficient for HCl (ft/sec)	Temperature (^oR)	HCl Emissions (tons/yr)
Tank 1	0.042	6.25	0.00346	560	0.0869
Tank 2	0.042	6.25	0.00346	560	0.0869
Tank 3	0.588	6.25	0.00346	560	1.2172
Tank 4	0.003	4.17	0.00346	530	0.0044
Tank 5	0.003	4.00	0.00346	530	0.0042
			Total HCl Emissions =		**1.40**

Note:

Gas Constant = 10.73 psia ft^3/^oR lb-mole
Molecular weight of HCl = 36.461 lb/lb-mole
HCl emissions (tons/yr) = M (lb/lbmole) * A (ft^2) * P (psia) * K (ft/sec) * 3600 (sec/hr) * 8760 (hrs/yr) / R (psia ft^3/^oR lbmole) * T1 (^oR) * 2000 (lbs/ton)
Where:

M = molecular weight of compound
A = area of tank
P = vapor pressure of compound in solution
K = gas-mass transfer coefficient
R = gas constant
T1 = absolute temperature of solution

Appendix A: Emission Calculations
PM and VOC Calculations

Company Name: **Howmet Corporation - LaPorte Casting Division**
Address City IN Zip: **1110 East Lincoln Way, LaPorte, IN 46350**
MPR#: **091-18287-00047**
Permit Reviewer: **Alic Bent/EVP**
Date: **24-Nov-03**

Barrel Sander Emissions

Barrel Sander	Strands Consumption Rate (lbs/yr)	Silica Content (%)	VOC Content (%)	PM Emissions (tons/yr)	VOC Emissions (tons/yr)
	1,200.00	0.98%	2.00%	0.0059	0.0120

Note:

PM emissions (tons/year) = strands consumption rate (lbs/yr) * silica content (%) * 1/2000 (lbs/ton)
VOC emissions (tons/year) = strands consumption rate (lbs/yr) * VOC content (%) * 1/2000 (lbs/ton)